



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,507	03/30/2004	John S. Lollar	13097/3	5299
757	7590	07/31/2007	EXAMINER	
BRINKS HOFER GILSON & LIONE			GIBBS, TERRA C	
P.O. BOX 10395			ART UNIT	PAPER NUMBER
CHICAGO, IL 60610			1635	
			MAIL DATE	DELIVERY MODE
			07/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10813507	3/30/04	LOLLAR, JOHN S.	13097/3

EXAMINER

Terra C. Gibbs

ART UNIT	PAPER
----------	-------

1635 7252007

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Notice to Comply with the Sequence Rules

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R. §1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 C.F.R. §1.821-1.825 for the reason(s) set forth on the attached Sequence Listing Error Report. Applicant must fully comply with the sequence rules for any response to this action to be considered fully responsive.

APPLICANT IS GIVEN 30 days FROM THE DATE OF THIS LETTER WITHIN WHICH TO COMPLY WITH THE SEQUENCE RULES of 37 C.F.R. §1.821-1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 C.F.R. §1.821(g). Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 C.F.R. §1.136. In no case may an applicant extend the period for response beyond the six-month statutory period. Direct the response to the undersigned. Applicant is requested to return a copy of the attached Notice to Comply with the response.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Terra C. Gibbs whose telephone number is 571-272-0758. The examiner can normally be reached on 9 am - 5 pm M-F. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, James Schultz can be reached on 571-272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's

PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

tcg
July 25, 2007

/Terra C. Gibbs/

=====

Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: Mon Jun 11 13:25:27 EDT 2007

=====

Reviewer Comments:

seq Id 6:

Missing amino acid numbering, they non-aligned 645,650,655

Please delete text appearing after seq id 21.

Application No: 10813507 Version No: 2.0

Input Set:

Output Set:

Started: 2007-05-25 16:08:39.424
Finished: 2007-05-25 16:08:48.098
Elapsed: 0 hr(s) 0 min(s) 8 sec(s) 674 ms
Total Warnings: 30
Total Errors: 681
No. of SeqIDs Defined: 21
Actual SeqID Count: 21

Error code	Error Description
W 112	Upper case found in data; Found at position(0) SeqId(6)
W 112	Upper case found in data; Found at position(3) SeqId(6)
W 112	Upper case found in data; Found at position(6) SeqId(6)
W 112	Upper case found in data; Found at position(9) SeqId(6)
W 112	Upper case found in data; Found at position(12) SeqId(6)
E 342	'n' position not defined found at POS: 15 SEQID(6)
W 112	Upper case found in data; Found at position(15) SeqId(6)
W 112	Upper case found in data; Found at position(18) SeqId(6)
W 112	Upper case found in data; Found at position(21) SeqId(6)
W 112	Upper case found in data; Found at position(24) SeqId(6)
W 112	Upper case found in data; Found at position(27) SeqId(6)
W 112	Upper case found in data; Found at position(30) SeqId(6)
W 112	Upper case found in data; Found at position(33) SeqId(6)
W 112	Upper case found in data; Found at position(36) SeqId(6)
W 112	Upper case found in data; Found at position(39) SeqId(6)
W 112	Upper case found in data; Found at position(42) SeqId(6)
W 112	Upper case found in data; Found at position(45) SeqId(6)
E 323	Invalid/missing amino acid numbering SEQID (6) POS (644)
E 323	Invalid/missing amino acid numbering SEQID (6) at Protein (645)
E 323	Invalid/missing amino acid numbering SEQID (6) POS (649)

Input Set:

Output Set:

Started: 2007-05-25 16:08:39.424
Finished: 2007-05-25 16:08:48.098
Elapsed: 0 hr(s) 0 min(s) 8 sec(s) 674 ms
Total Warnings: 30
Total Errors: 681
No. of SeqIDs Defined: 21
Actual SeqID Count: 21

Error code	Error Description
E 323	Invalid/missing amino acid numbering SEQID (6) at Protein (650)
E 323	Invalid/missing amino acid numbering SEQID (6) POS (654)
E 323	Invalid/missing amino acid numbering SEQID (6) at Protein (655)
E 323	Invalid/missing amino acid numbering SEQID (6) POS (659)
E 323	Invalid/missing amino acid numbering SEQID (6) at Protein (660)
E 323	Invalid/missing amino acid numbering SEQID (6) POS (664)
E 323	Invalid/missing amino acid numbering SEQID (6) at Protein (665)
E 323	Invalid/missing amino acid numbering SEQID (6) POS (669)
E 323	Invalid/missing amino acid numbering SEQID (6) at Protein (670)
E 323	Invalid/missing amino acid numbering SEQID (6) POS (674)
E 323	Invalid/missing amino acid numbering SEQID (6) at Protein (675)
E 323	Invalid/missing amino acid numbering SEQID (6) POS (679)
E 323	Invalid/missing amino acid numbering SEQID (6) at Protein (680)
E 323	Invalid/missing amino acid numbering SEQID (6) POS (684)
E 323	Invalid/missing amino acid numbering SEQID (6) at Protein (685)
E 323	Invalid/missing amino acid numbering SEQID (6) POS (689)
E 323	Invalid/missing amino acid numbering SEQID (6) at Protein (690) This error has occurred more than 20 times, will not be displayed
E 331	Count of Protein differs from the <211> tag Input: 2351 Calculated: 2335 SEQID(6)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)

Input Set:

Output Set:

Started: 2007-05-25 16:08:39.424
Finished: 2007-05-25 16:08:48.098
Elapsed: 0 hr(s) 0 min(s) 8 sec(s) 674 ms
Total Warnings: 30
Total Errors: 681
No. of SeqIDs Defined: 21
Actual SeqID Count: 21

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
E 355	Empty lines found between the amino acid numbering and the
E 321	No. of Bases conflict, this line has no nucleotides SEQID (21)
E 355	Empty lines found between the amino acid numbering and the
E 321	No. of Bases conflict, this line has no nucleotides SEQID (21)
W 112	Upper case found in data; Found at position(0) SeqId(21)
W 112	Upper case found in data; Found at position(1) SeqId(21)
W 112	Upper case found in data; Found at position(2) SeqId(21)
W 112	Upper case found in data; Found at position(14) SeqId(21) This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Lollar, John S.

<120> Nucleic Acid and Amino Acid Sequences
encoding High-Level Expressor Factor VIII Polypeptides and
Methods of Use

<130> 007157/ 276516

<140> 10813507

<141> 2004-03-30

<150> PCT/US02/33403

<151> 2002-10-07

<150> 60/327,388

<151> 2001-10-05

<160> 21

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 6402

<212> DNA

<213> Sus scrofa

<220>

<221> gene

<222> (1)...(6399)

<223> Factor VIII-- Full Length

<221> CDS

<222> (1)...(6399)

<400> 1

atg cag cta gag ctc tcc acc tgt gtc ttt ctg tgt ctc ttg cca ctc 48

Met Gln Leu Glu Leu Ser Thr Cys Val Phe Leu Cys Leu Leu Pro Leu.

1 5 10 15

ggc ttt agt gcc atc agg aga tac tac ctg ggc gca gtg gaa ctg tcc 96

Gly Phe Ser Ala Ile Arg Arg Tyr Tyr Leu Gly Ala Val Glu Leu Ser

20 25 30

tgg gac tac cgg caa agt gaa ctc ctc cgt gag ctg cac gtg gac acc 144

Trp Asp Tyr Arg Gln Ser Glu Leu Leu Arg Glu Leu His Val Asp Thr

35 40 45

aga ttt cct gct aca gcg cca gga gct ctt ccg ttg ggc ccg tca gtc 192

Arg Phe Pro Ala Thr Ala Pro Gly Ala Leu Pro Leu Gly Pro Ser Val

50 55 60

ctg tac aaa aag act gtg ttc gta gag ttc acg gat caa ctt ttc agc 240

Leu Tyr Lys Lys Thr Val Phe Val Glu Phe Thr Asp Gln Leu Phe Ser

65 70 75 80

gtt gcc agg ccc agg cca cca tgg atg ggt ctg ctg ggt cct acc atc	288	
Val Ala Arg Pro Arg Pro Pro Trp Met Gly Leu Leu Gly Pro Thr Ile		
85	90	95
cag gct gag gtt tac gac acg gtg gtc gtt acc ctg aag aac atg gct	336	
Gln Ala Glu Val Tyr Asp Thr Val Val Thr Leu Lys Asn Met Ala		
100	105	110
tct cat ccc gtt agt ctt cac gct gtc ggc gtc tcc ttc tgg aaa tct	384	
Ser His Pro Val Ser Leu His Ala Val Gly Val Ser Phe Trp Lys Ser		
115	120	125
tcc gaa ggc gct gaa tat gag gat cac acc agc caa agg gag aag gaa	432	
Ser Glu Gly Ala Glu Tyr Glu Asp His Thr Ser Gln Arg Glu Lys Glu		
130	135	140
gac gat aaa gtc ctt ccc ggt aaa agc caa acc tac gtc tgg cag gtc	480	
Asp Asp Lys Val Leu Pro Gly Lys Ser Gln Thr Tyr Val Trp Gln Val		
145	150	155
160		
ctg aaa gaa aat ggt cca aca gcc tct gac cca cca tgt ctc acc tac	528	
Leu Lys Glu Asn Gly Pro Thr Ala Ser Asp Pro Pro Cys Leu Thr Tyr		
165	170	175
tca tac ctg tct cac gtg gac ctg gtg aaa gac ctg aat tcg ggc ctc	576	
Ser Tyr Leu Ser His Val Asp Leu Val Lys Asp Leu Asn Ser Gly Leu		
180	185	190
att gga gcc ctg ctg gtt tgt aga gaa ggg agt ctg acc aga gaa agg	624	
Ile Gly Ala Leu Leu Val Cys Arg Glu Gly Ser Leu Thr Arg Glu Arg		
195	200	205
acc cag aac ctg cac gaa ttt gta cta ctt ttt gct gtc ttt gat gaa	672	
Thr Gln Asn Leu His Glu Phe Val Leu Leu Phe Ala Val Phe Asp Glu		
210	215	220
ggg aaa agt tgg cac tca gca aga aat gac tcc tgg aca cgg gcc atg	720	
Gly Lys Ser Trp His Ser Ala Arg Asn Asp Ser Trp Thr Arg Ala Met		
225	230	235
240		
gat ccc gca cct gcc agg gcc cag cct gca atg cac aca gtc aat ggc	768	
Asp Pro Ala Pro Ala Arg Ala Gln Pro Ala Met His Thr Val Asn Gly		
245	250	255
tat gtc aac agg tct ctg cca ggt ctg atc gga tgt cat aag aaa tca	816	
Tyr Val Asn Arg Ser Leu Pro Gly Leu Ile Gly Cys His Lys Lys Ser		
260	265	270
gtc tac tgg cac gtg att gga atg ggc acc agc ccg gaa gtg cac tcc	864	
Val Tyr Trp His Val Ile Gly Met Gly Thr Ser Pro Glu Val His Ser		
275	280	285
att ttt ctt gaa ggc cac acg ttt ctc gtg agg cac cat cgc cag gct	912	
Ile Phe Leu Glu Gly His Thr Phe Leu Val Arg His His Arg Gln Ala		
290	295	300

tcc ttg gag atc tcg cca cta act ttc ctc act gct cag aca ttc ctg	960
Ser Leu Glu Ile Ser Pro Leu Thr Phe Leu Thr Ala Gln Thr Phe Leu	
305 310 315 320	
atg gac ctt ggc cag ttc cta ctg ttt tgt cat atc tct tcc cac cac	1008
Met Asp Leu Gly Gln Phe Leu Leu Phe Cys His Ile Ser Ser His His	
325 330 335	
cat ggt ggc atg gag gct cac gtc aga gta gaa agc tgc gcc gag gag	1056
His Gly Gly Met Glu Ala His Val Arg Val Glu Ser Cys Ala Glu Glu	
340 345 350	
ccc cag ctg cgg agg aaa gct gat gaa gag gaa gat tat gat gac aat	1104
Pro Gln Leu Arg Arg Lys Ala Asp Glu Glu Asp Tyr Asp Asp Asn	
355 360 365	
ttg tac gac tcg gac atg gac gtg gtc cgg ctc gat ggt gac gac gtg	1152
Leu Tyr Asp Ser Asp Met Asp Val Val Arg Leu Asp Gly Asp Asp Val	
370 375 380	
tct ccc ttt atc caa atc cgc tcg gtt gcc aag aag cat ccc aaa acc	1200
Ser Pro Phe Ile Gln Ile Arg Ser Val Ala Lys Lys His Pro Lys Thr	
385 390 395 400	
tgg gtg cac tac atc tct gca gag gag gag gac tac gac gcc ccc	1248
Trp Val His Tyr Ile Ser Ala Glu Glu Asp Trp Asp Tyr Ala Pro	
405 410 415	
gcg gtc ccc agc ccc agt gac aga agt tat aaa agt ctc tac ttg aac	1296
Ala Val Pro Ser Pro Ser Asp Arg Ser Tyr Lys Ser Leu Tyr Leu Asn	
420 425 430	
agt ggt cct cag cga att ggt agg aaa tac aaa aaa gct cga ttc gtc	1344
Ser Gly Pro Gln Arg Ile Gly Arg Lys Tyr Lys Lys Ala Arg Phe Val	
435 440 445	
gct tac acg gat gta aca ttt aag act cgt aaa gct att ccg tat gaa	1392
Ala Tyr Thr Asp Val Thr Phe Lys Thr Arg Lys Ala Ile Pro Tyr Glu	
450 455 460	
tca gga atc ctg gga cct tta ctt tat gga gaa gtt gga gac aca ctt	1440
Ser Gly Ile Leu Gly Pro Leu Leu Tyr Gly Glu Val Gly Asp Thr Leu	
465 470 475 480	
ttg att ata ttt aag aat aaa gcg agc cga cca tat aac atc tac cct	1488
Leu Ile Ile Phe Lys Asn Lys Ala Ser Arg Pro Tyr Asn Ile Tyr Pro	
485 490 495	
cat gga atc act gat gtc agc gct ttg cac cca ggg aga ctt cta aaa	1536
His Gly Ile Thr Asp Val Ser Ala Leu His Pro Gly Arg Leu Leu Lys	
500 505 510	
ggt tgg aaa cat ttg aaa gac atg cca att ctg cca gga gag act ttc	1584
Gly Trp Lys His Leu Lys Asp Met Pro Ile Leu Pro Gly Glu Thr Phe	
515 520 525	
aag tat aaa tgg aca gtg act gtg gaa gat ggg cca acc aag tcc gat	1632

Lys	Tyr	Lys	Trp	Thr	Val	Thr	Val	Glu	Asp	Gly	Pro	Thr	Lys	Ser	Asp	
530				535				540								
cct cgg tgc ctg acc cgc tac tac tcg agc tcc att aat cta gag aaa															1680	
Pro	Arg	Cys	Leu	Thr	Arg	Tyr	Tyr	Ser	Ser	Ile	Asn	Leu	Glu	Lys		
545				550				555			560					
gat ctg gct tcg gga ctc att ggc cct ctc atc tgc tac aaa gaa															1728	
Asp	Leu	Ala	Ser	Gly	Leu	Ile	Gly	Pro	Leu	Leu	Ile	Cys	Tyr	Lys	Glu	
				565				570			575					
tct gta gac caa aga gga aac cag atg atg tca gac aag aga aac gtc															1776	
Ser	Val	Asp	Gln	Arg	Gly	Asn	Gln	Met	Met	Ser	Asp	Lys	Arg	Asn	Val	
580				585				590								
atc ctg ttt tct gta ttc gat gag aat caa agc tgg tac ctc gca gag															1824	
Ile	Leu	Phe	Ser	Val	Phe	Asp	Glu	Asn	Gln	Ser	Trp	Tyr	Leu	Ala	Glu	
595				600				605								
aat att cag cgc ttc ctc ccc aat ccg gat gga tta cag ccc cag gat															1872	
Asn	Ile	Gln	Arg	Phe	Leu	Pro	Asn	Pro	Asp	Gly	Leu	Gln	Pro	Gln	Asp	
610				615				620								
cca gag ttc caa gct tct aac atc atg cac agc atc aat ggc tat gtt															1920	
Pro	Glu	Phe	Gln	Ala	Ser	Asn	Ile	Met	His	Ser	Ile	Asn	Gly	Tyr	Val	
625				630				635			640					
ttt gat agc ttg cag ctg tcg gtt tgt ttg cac gag gtg gca tac tgg															1968	
Phe	Asp	Ser	Leu	Gln	Leu	Ser	Val	Cys	Leu	His	Glu	Val	Ala	Tyr	Trp	
645				650				655								
tac att cta agt gtt gga gca cag acg gac ttc ctc tcc gtc ttc ttc															2016	
Tyr	Ile	Leu	Ser	Val	Gly	Ala	Gln	Thr	Asp	Phe	Leu	Ser	Val	Phe	Phe	
660				665				670								
tct ggc tac acc ttc aaa cac aaa atg gtc tat gaa gac aca ctc acc															2064	
Ser	Gly	Tyr	Thr	Phe	Lys	His	Lys	Met	Val	Tyr	Glu	Asp	Thr	Leu	Thr	
675				680				685								
ctg ttc ccc ttc tca gga gaa acg gtc ttc atg tca atg gaa aac cca															2112	
Leu	Phe	Pro	Phe	Ser	Gly	Glu	Thr	Val	Phe	Met	Ser	Met	Glu	Asn	Pro	
690				695				700								
ggc ctc tgg gtc cta ggg tgc cac aac tca gac ttg cgg aac aga ggg															2160	
Gly	Leu	Trp	Val	Leu	Gly	Cys	His	Asn	Ser	Asp	Leu	Arg	Asn	Arg	Gly	
705				710				715			720					
atg aca gcc tta ctg aag gtg tat agt tgt gac agg gac att ggt gat															2208	
Met	Thr	Ala	Leu	Leu	Lys	Val	Tyr	Ser	Cys	Asp	Arg	Asp	Ile	Gly	Asp	
725				730				735								
tat tat gac aac act tat gaa gat att cca ggc ttc ttg ctg agt gga															2256	
Tyr	Tyr	Asp	Asn	Thr	Tyr	Glu	Asp	Ile	Pro	Gly	Phe	Leu	Leu	Ser	Gly	
740				745				750								
aag aat gtc att gaa ccc aga agc ttt gcc cag aat tca aga ccc cct															2304	
Lys	Asn	Val	Ile	Glu	Pro	Arg	Ser	Phe	Ala	Gln	Asn	Ser	Arg	Pro	Pro	

755

760

765

agt gcg agc caa aag caa ttc caa acc atc aca agt cca gaa gat gac 2352
 Ser Ala Ser Gln Lys Gln Phe Gln Thr Ile Thr Ser Pro Glu Asp Asp
 770 775 780

gtg gag ctt gac ccg cag tct gga gag aga acc caa gca ctg gaa gaa 2400
 Val Glu Leu Asp Pro Gln Ser Gly Glu Arg Thr Gln Ala Leu Glu Glu
 785 790 795 800

cta agt gtc ccc tct ggt gat ggg tcg atg ctc ttg gga cag aat cct 2448
 Leu Ser Val Pro Ser Gly Asp Gly Ser Met Leu Leu Gly Gln Asn Pro
 805 810 815

gct cca cat ggc tca tcc tca tct gat ctt caa gaa gcc agg aat gag 2496
 Ala Pro His Gly Ser Ser Ser Asp Leu Gln Glu Ala Arg Asn Glu
 820 825 830

gct gat gat tat tta cct gga gca aga gaa aga ggc acg gcc cca tcc 2544
 Ala Asp Asp Tyr Leu Pro Gly Ala Arg Glu Arg Gly Thr Ala Pro Ser
 835 840 845

gca gcg gca cgt ctc aga cca gag ctg cat cac agt gcc gaa aga gta 2592
 Ala Ala Ala Arg Leu Arg Pro Glu Leu His His Ser Ala Glu Arg Val
 850 855 860

ctt act cct gag cca gag aaa gag ttg aag aaa ctt gat tca aaa atg 2640
 Leu Thr Pro Glu Pro Glu Lys Glu Leu Lys Lys Leu Asp Ser Lys Met
 865 870 875 880

tct agt tca tca gac ctt cta aag act tcg cca aca att cca tca gac 2688
 Ser Ser Ser Asp Leu Leu Lys Thr Ser Pro Thr Ile Pro Ser Asp
 885 890 895

acg ttg tca gcg gag act gaa agg aca cat tcc tta ggc ccc cca cac 2736
 Thr Leu Ser Ala Glu Thr Glu Arg Thr His Ser Leu Gly Pro Pro His
 900 905 910

ccg cag gtt aat ttc agg agt caa tta ggt gcc att gta ctt ggc aaa 2784
 Pro Gln Val Asn Phe Arg Ser Gln Leu Gly Ala Ile Val Leu Gly Lys
 915 920 925

aat tca tct cac ttt att ggg gct ggt gtc cct ttg ggc tcg act gag 2832
 Asn Ser Ser His Phe Ile Gly Ala Gly Val Pro Leu Gly Ser Thr Glu
 930 935 940

gag gat cat gaa agc tcc ctg gga gaa aat gta tca cca gtg gag agt 2880
 Glu Asp His Glu Ser Ser Leu Gly Glu Asn Val Ser Pro Val Glu Ser
 945 950 955 960

gac ggg ata ttt gaa aag gaa aga gct cat gga cct gct tca ctg acc 2928
 Asp Gly Ile Phe Glu Lys Glu Arg Ala His Gly Pro Ala Ser Leu Thr
 965 970 975

aaa gac gat gtt tta ttt aaa gtt aat atc tct ttg gta aag aca aac 2976
 Lys Asp Asp Val Leu Phe Lys Val Asn Ile Ser Leu Val Lys Thr Asn
 980 985 990

aag gca cga gtt tac tta aaa act aat aga aag att cac att gat gac	3024		
Lys Ala Arg Val Tyr Leu Lys Thr Asn Arg Lys Ile His Ile Asp Asp			
995	1000	1005	
gca gct tta tta act gag aat agg gca tct gca acg ttt atg gac aaa	3072		
Ala Ala Leu Leu Thr Glu Asn Arg Ala Ser Ala Thr Phe Met Asp Lys			
1010	1015	1020	
aat act aca gct tcg gga tta aat cat gtg tca aat tgg ata aaa ggg	3120		
Asn Thr Thr Ala Ser Gly Leu Asn His Val Ser Asn Trp Ile Lys Gly			
1025	1030	1035	1040
ccc ctt ggc aag aac ccc cta agc tcg gag cga ggc ccc agt cca gag	3168		
Pro Leu Gly Lys Asn Pro Leu Ser Ser Glu Arg Gly Pro Ser Pro Glu			
1045	1050	1055	
ctt ctg aca tct tca gga tca gga aaa tct gtg aaa ggt cag agt tct	3216		
Leu Leu Thr Ser Ser Gly Ser Gly Lys Ser Val Val Lys Gly Gln Ser Ser			
1060	1065	1070	
ggg cag ggg aga ata cgg gtg gca gtg gaa gag gaa gaa ctg agc aaa	3264		
Gly Gln Gly Arg Ile Arg Val Ala Val Glu Glu Glu Leu Ser Lys			
1075	1080	1085	
ggc aaa gag atg atg ctt ccc aac agc gag ctc acc ttt ctc act aac	3312		
Gly Lys Glu Met Met Leu Pro Asn Ser Glu Leu Thr Phe Leu Thr Asn			
1090	1095	1100	
tcg gct gat gtc caa gga aac gat aca cac agt caa gga aaa aag tct	3360		
Ser Ala Asp Val Gln Gly Asn Asp Thr His Ser Gln Gly Lys Lys Ser			
1105	1110	1115	1120
cgg gaa gag atg gaa agg aga gaa aaa tta gtc caa gaa aaa gtc gac	3408		
Arg Glu Glu Met Glu Arg Arg Glu Lys Leu Val Gln Glu Lys Val Asp			
1125	1130	1135	
ttg cct cag gtg tat aca gcg act gga act aag aat ttc ctg aga aac	3456		
Leu Pro Gln Val Tyr Thr Ala Thr Gly Thr Lys Asn Phe Leu Arg Asn			
1140	1145	1150	
att ttt cac caa agc act gag ccc agt gta gaa ggg ttt gat ggg ggg	3504		
Ile Phe His Gln Ser Thr Glu Pro Ser Val Glu Gly Phe Asp Gly Gly			
1155	1160	1165	
tca cat gcg ccg gtg cct caa gac agc agg tca tta aat gat tcg gca	3552		
Ser His Ala Pro Val Pro Gln Asp Ser Arg Ser Leu Asn Asp Ser Ala			
1170	1175	1180	
gag aga gca gag act cac ata gcc cat ttc tca gca att agg gaa gag	3600		
Glu Arg Ala Glu Thr His Ile Ala His Phe Ser Ala Ile Arg Glu Glu			
1185	1190	1195	1200
gca ccc ttg gaa gcc ccg gga aat cga aca ggt cca ggt ccg agg agt	3648		
Ala Pro Leu Glu Ala Pro Gly Asn Arg Thr Gly Pro Gly Pro Arg Ser			
1205	1210	1215	

gct gtt ccc cgc cgc gtt aag cag agc ttg aaa cag atc aga ctc ccg 3696
Ala Val Pro Arg Arg Val Lys Gln Ser Leu Lys Gln Ile Arg Leu Pro
1220 1225 1230

cta gaa gaa ata aag cct gaa agg ggg gtt ctg aat gcc acc tca 3744
Leu Glu Glu Ile Lys Pro Glu Arg Gly Val Val Leu Asn Ala Thr Ser
1235 1240 1245

acc cgg tgg tct gaa agc agt cct atc tta caa gga gcc aaa aga aat 3792
Thr Arg Trp Ser Glu Ser Ser Pro Ile Leu Gln Gly Ala Lys Arg Asn
1250 1255 1260

aac ctt tct tta cct ttc ctg acc ttg gaa atg gcc gga ggt caa gga 3840
Asn Leu Ser Leu Pro Phe Leu Thr Leu Glu Met Ala Gly Gly Gln Gly
1265 1270 1275 1280

aag atc agc gcc ctg ggg aaa agt gcc gca ggc ccg ctg gcg tcc ggg 3888
Lys Ile Ser Ala Leu Gly Lys Ser Ala Ala Gly Pro Leu Ala Ser Gly
1285 1290 1295

aag ctg gag aag gct gtt ctc tct tca gca ggc ttg tct gaa gca tct 3936
Lys Leu Glu Lys Ala Val Leu Ser Ser Ala Gly Leu Ser Glu Ala Ser
1300 1305 1310

ggc aaa gct gag ttt ctt cct aaa gtt cga gtt cat cgg gaa gac ctg 3984
Gly Lys Ala Glu Phe Leu Pro Lys Val Arg Val His Arg Glu Asp Leu
1315 1320 1325

ttg cct caa aaa acc agc aat gtt tct tgc gca cac ggg gat ctc ggc 4032
Leu Pro Gln Lys Thr Ser Asn Val Ser Cys Ala His Gly Asp Leu Gly
1330 1335 1340

cag gag atc ttc ctg cag aaa aca cgg gga cct gtt aac ctg aac aaa 4080
Gln Glu Ile Phe Leu Gln Lys Thr Arg Gly Pro Val Asn Leu Asn Lys
1345 1350 1355 1360

gta aat aga cct gga agg act ccc tcc aag ctt ctg ggt ccc ccg atg 4128
Val Asn Arg Pro Gly Arg Thr Pro Ser Lys Leu Leu Gly Pro Pro Met
1365 1370 1375

ccc aaa gag tgg gaa tcc cta gag aag tca cca aaa agc aca gct ctc 4176
Pro Lys Glu Trp Glu Ser Leu Glu Lys Ser Pro Lys Ser Thr Ala Leu
1380 1385 1390

agg acg aaa gac atc atc agt tta ccc ctg gac cgt cac gaa agc aat 4224

Notice to Comply	Application No.	Applicant(s)	
	10813507	LOLLAR, JOHN S.	
	Examiner Terra C. Gibbs	Art Unit 1635	

**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING
NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

Applicant must file the items indicated below within the time period set in the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).
- 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- 7. Other: Please see attached Sequence Listing Error Form at "Reviewer Comments".

Applicant Must Provide:

- An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- An initial or substitute paper copy of the "Sequence Listing", **as well as an amendment specifically directing its entry into the specification.**
- A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (571) 272-2510

For CRF Submission Help, call (571) 272-2501/2583.

PatentIn Software Program Support

Technical Assistance.....703-287-0200

To Purchase PatentIn Software.....703-306-2600

PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR REPLY